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AUTHOR Grosek, Robert J.
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ABSTRACT

Two paradigms (rewards and verbal prompts, and timeout procedures), both making social consequences contingent upon the S's behavior and both requiring the S to practice the desired response, were used to reduce inappropriate language in a 33 year old resident of a center for the developmentally disabled. Data from the morning and afternoon sessions supported the notion that the timeout from social interaction ultimately served to increase the amount of cooperation received from the client. It was found that even with just a few training trials, there appeared to be a noticeable reduction in inappropriate language behavior. Statistical data and questions for the morning session are appended. (Author/SBH)

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Two Strategies to Reduce Inappropriate Language Behavior

Robert J. Grosek
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Inappropriate language is a problem often found in residential populations of the mentally retarded. Types of such behavior include irrelevant, spontaneous statements, statements inappropriate to the context of the conversation, and both immediate and delayed echolalia. It is commonly believed that these bizarre utterances are products of the social contingencies inherent in the patient's environment (Lovaas, 1977). In this sense, those individuals who most frequently come in contact with the client are the ones who shape his language. In an institutional setting, direct-care staff is one group of individuals which serves as a powerful shaper of language behavior.

The method for establishing language patterns is relatively complex. In many instances, the direct-care staff respond to the content of the patient's language rather than to its context (Bandura, 1969). By responding to the content, the staff inadvertently produce undesirable language while eliminating or suppressing appropriate language. In one actual case, staff reinforced (through laughter) a client for calling other people a "hotdog." In time, the name-calling escalated to the point of being offensive and staff ultimately requested a treatment plan to eliminate this behavior. In a second actual case, a client made an appropriate verbal statement when he asked for a "cookie." Up to this point, he had been enrolled for several weeks in an intensive language program to initiate expressive speech. This request represented one of the first self-initiated statements by the resident. However, staff reprimanded him for asking for a snack between meals. The client ceased to initiate any speech for several weeks following this incident. In similar instances, staff may inadvertently increase language disfluences through selective attention (Bandura, 1969).

If social contingencies serve to strengthen and maintain bizarre language behavior, one might speculate that social contingencies can be manipulated to eliminate undesirable verbalizations while simultaneously inculcating appropriate language behavior. Two paradigms were explored, each designed to increase appropriate speech. Each paradigm allowed the subject to practice the desired

verbalization and each used the removal of social attention to reduce the frequency of unwanted language behavior.

METHOD

SUBJECT: Fran, a 33 year old female, resides in an upstate New York residential center for the developmentally disabled. Fran is generally independent in self-care skills, although at times the staff may give verbal prompts to insure neatness or speed. She has excellent receptive language skills and can express herself in complete sentences. Fran does not exhibit any physical or sensory disabilities. Fran's record indicates that she attended school through the third grade. Typically, she does not attend to formal tasks at the residential center. In a pilot session, however, Fran remained on-task (doing simple puzzles) in excess of 15 minutes in order to receive food reinforcement. Intellectual testing was attempted on several occasions, but disruptive and uncooperative behavior precluded meaningful test results. At another institution, she had been diagnosed as a chronic schizophrenic of undetermined origin.

Fran paces continuously in any setting that she is in, and usually in the proximity of others. Several times each day she will hop, run, or move across the room by rapidly stomping her feet. Once a day, Fran will rush towards a staff person with her hands flapping excitedly, but always stops abruptly in front of them. Approximately once a month she will hit another resident and, as frequently, engage in seemingly unprovoked crying behavior.

Fran's speech is characterized by rambling statements, typically devoid of any trend of throught. Some of her speech is simply gibberish. Most of the inappropriate verbal behavior consists of immediate and delayed echolalia, mimicking, irrelevant statements, and responding incorrectly to statements. She frequently interrupts other people's conversations by placing her face next to someone else's and repeating a sentence that was just spoken.

The configuration and preserverance of her verbal behavior suggest that

Fran's speech is on a complex reinforcement schedule. Formal time samples indicate that the facility's staff inconsistently respond to her verbal statements. In one episode Fran asked "Anyone want a hotdog?! Anyone want a hotdog?!" One staff member laughed and said "Yes, I'll take mustard with mine." Minutes later a laundry worker who was less familiar with Fran simply ignored her. Time samples indicated that there were many other examples such as this one illustrating inconsistent reinforcement or punishment of Fran's language behavior.

TREATMENT SETTING: Both of the following paradigms took place on an unoccupied ward in a developmental center in upstate New York. Although no residents lived on the ward at the time of this study, the ward was set up with beds, tables, televisions, and other standard furnishings in anticipation of its opening. Except for the absence of other residents, it closely resembled other living units. This ward was being used by other wards as a recreation center. Its living area contained a pool table, a skittleboard, a ping-pong table, and various table games. During the day of this study, however, the ward was not being used by other staff or residents.

The subject was given ten minutes to adapt to the ward. During this time the therapists walked Fran through the ward, indicating where the bathrooms were located, and briefly demonstrated some of the recreational games. For her safety, doors leading off the unit to the kitchen and other utility areas and to the bedrooms were locked.

MORNING SESSION: After Fran adapted to the unit, she was given a brief explanation of the program. Fran was asked a series of questions (Table I). If she was correct, Fran would receive both verbal and primary (raisins, potato chips, M&Ms) reinforcements. If she was incorrect (or failed to respond with 15 seconds), the incorrect response was interrupted and a verbal prompt of the correct response was given. For example, when asked "What is your name?", the corresponding verbal prompt would be "Say ... my name is Fran."

The question would be repeated. If Fran was correct, she would receive reinforcement and proceed to the next question. If she was incorrect, the therapist would interrupt with the correct verbal prompt.

The question would then be presented for the third time. If Fran gave the correct response, she would receive reinforcement. If Fran was incorrect or engaged in incompatible behavior (i.e., walking away), the time-out procedure, as described below, would be implemented.

The time-out procedure was also used if Fran persisted in inappropriate behavior or speech between trials. The first time these behaviors occurred, Fran was told that she was behaving inappropriately. If the behavior continued, Fran was warned that such behavior would lead to time-out. If the behavior persisted, the therapist implemented the time-out procedure.

TIME-OUT PROCEDURE: This study used a variation of the time-out procedure that was commonly implemented in the developmental center. Instead of removing Fran from the treatment setting whenever she behaved inappropriately, the therapists removed themselves to a small room. The data sheets, food reinforcers, and stopwatches were kept on a mobile cart. When the therapists left they also removed all traces of the therapy sessions. Fran still had full access to the rest of the unit, including the recreational games. She did not, however, have any social contact with anyone for the duration of the time-out.

The length of the time-out varied. The first two time-outs lasted 10 minutes, the second two lasted 20 minutes, and the next two lasted 30 minutes. The final time-out was to last 40 minutes, but because of an unanticipated interruption in the program, it was reduced to 10 minutes.

At the end of the specified period of time, the therapists returned to the treatment setting to resume the questioning, beginning each time with the first question. For each session the therapists recorded the number of correctly answered questions. There were eight trials during the r ing session.

AFTERNOON SESSIONS: Following lunch, Fran was returned to the unit and allowed ten minutes to readapt to the treatment setting. The therapists explained that they would like to discuss several interesting topics with her. She was cautioned, however, that whenever she said anything silly, the therapists would walk away.

The therapists began the session by introducing a topic; for example, "animals one might find in a zoo." Fran was allowed to speak on this subject for as long as she wished. When she stopped speaking, the therapists would ask questions to elicit more verbal responses from Fran. "Yes-and-No" type questions were avoided. Fran was permitted to digress to related topics (such as describing pets she had had at home or animals she had seen outdoors). However, if she changed the topic completely, the therapists promptly interrupted her by saying "Fran, that's interesting, but tell me more about ...", thus returning her to the original topic.

If Fran made an inappropriate comment, she was interrupted and required to practice a more appropriate response. For example:

Therapist: "Fran, name a vegetable that grows in the garden."

Fran: "Hotdogs!"

Therapist: "No, Fran. That's silly! Carrots grow in a garden. Fran, name a vegetable that grown in the garden."

The first two times that Fran produced an inappropriate statement in succession, the therapists intervened as described above. If this occurred a third time in a row, the therapists said "No" and removed themselves from the area. This ended the sessions.

The time-out was similar to the one described in the morning session. During time-out, the therapists retired to a small room for ten minutes. The length of the time-out did not vary. Fran had free access to the rest of the unit, but she was not able to leave the unit or to have social contact with anyone else.

Following the ten minute time-out, the therapists returned to the treatment setting and introduced a new topic. In all, there were a total of nine such sessions.

Both the length of the session (in seconds) and the percent of appropriate statements were recorded. An appropriate statement was defined simply as one that was not interrupted by the therapists.

RESULTS

In both sessions the subject's verbal behavior showed a marked improvement. Table II and Figure I describe the number of questions that were correctly answered in the morning session. In the first four sessions, the subject averaged 1.75 correct responses out of a possible score of ten. On the final four sessions, the subject averaged 30 correct responses. This represents an improvement of 71% over time.

Figure III represents both the number of verbalizations for each session and the percent of appropriate verbalizations. Comparing the number of responses for the first four sessions with the last four sessions, there was an increase in verbal output (87 versus 181 responses). The percent of appropriate verbal statements for the nine trials remained relatively constant (average = 68%).

There appears to have been an increase in both the length of the session and the number of statements. Anecdotally, it appeared that the length of the statements also increased although this variable was not specifically measured.

DISCUSSION

The data from both the morning and afternoon sessions supports the notion that the time-out from social interaction ultimately served to increase the amount of cooperation that we received from the client. This is evidenced by both the number of questions that were appropriately answered and by the length of the sessions. In both sessions, the client appears to be working to maintain

the social reinforcement.

It is noteworthy that, in the afternoon session, the client spent roughly the same percentage of time (32%) in inappropriate verbalizations, regardless of the length of the session. As the sessions increased in length, there were more verbalizations as well as more bizarre statements. The ratio of bizarre to total verbalizations remained fairly constant. One might suppose that the client was "testing" the therapists. If she made one or two bizarre statements in a row, she was merely reprimanded. As long as she avoided the third consecutive inappropriate statement (which would have ended the social interaction), the session could last indefinitely.

If bizarre behavior is maintained by social contingencies, then the removal of the social contingency should result in a diminishing of the behavior. This is a simple extinction. More appropriate speech can then be inculcated by demonstrating a correct verbal statement and having the client practice that statement.

The importance of the social attention appears to be evident in this study. The subject worked to maintain the social reinforcement to the extent that she reduced the frequency of the inappropriate verbalizations and cooperated in the question-and-answer sessions.

References

Bandura, Albert, Principles of Behavior Modification. New York: Holt, Rinehart and Winston, Inc., 1976, p. 319 and p. 369.

Lovaas, O. Ivar, The Autistic Child. New York: Irvington Publishers, 1977, pp. 103-105.

TABLE I

QUESTIONS FOR THE MORNING SESSION

1. Do you want a piece of (food snack)?
2. What is your name?
3. Do you want a piece of (food snack)?
4. What do you sleep on?
5. What is the color of your (article of clothing)?
6. Which of these foods do you want?
7. What is this (point to a nearby object)?
8. What do you drink milk out of?
9. Which is bigger - a house or a car?
10. Which of these foods do you want?

TABLE II

Number of Questions Presented and Appropriately Answered

Session	Number of Questions	Length of Previous Time-Out (Minutes)
1	1	0
2	2	10
3	2	10
4	2	20
5	2	20
6	4	30
7	2	30
8	4	10

TABLE III

Verbal Statements

Session	Total Statements	Number Appropriate	% Appropriate	Length of Session (Seconds)
1	30	24	80	250
2	8	3	38	117
3	37	26	70	397
4	12	7	58	156
5	20	15	75	242
6	83	62	75	915
7	29	21	72	540
8	47	31	66	560
9	22	18	82	290

FIGURE I

The number of questions presented and the length of the previous time-out

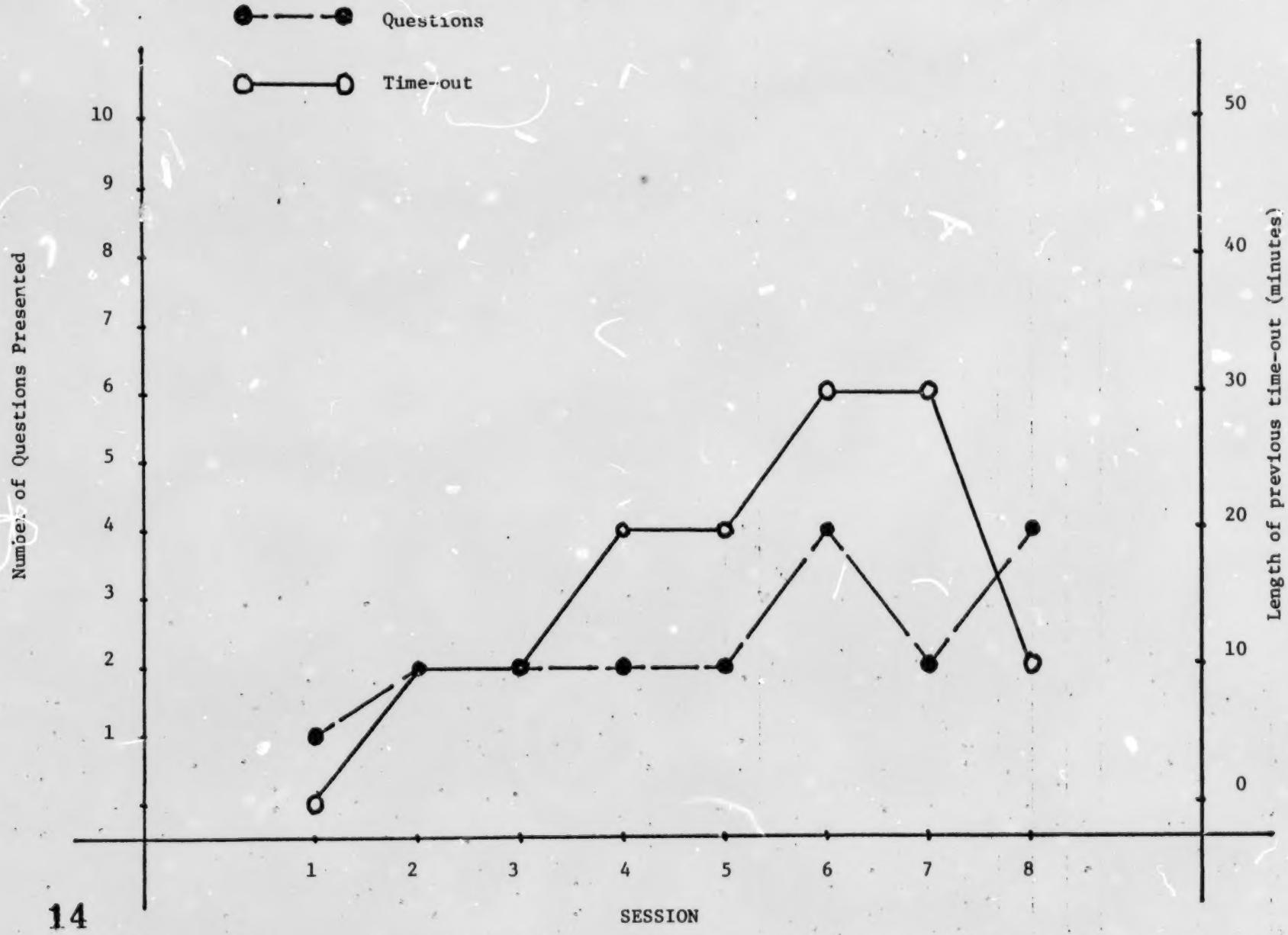

FIGURE II

Time length of individual sessions

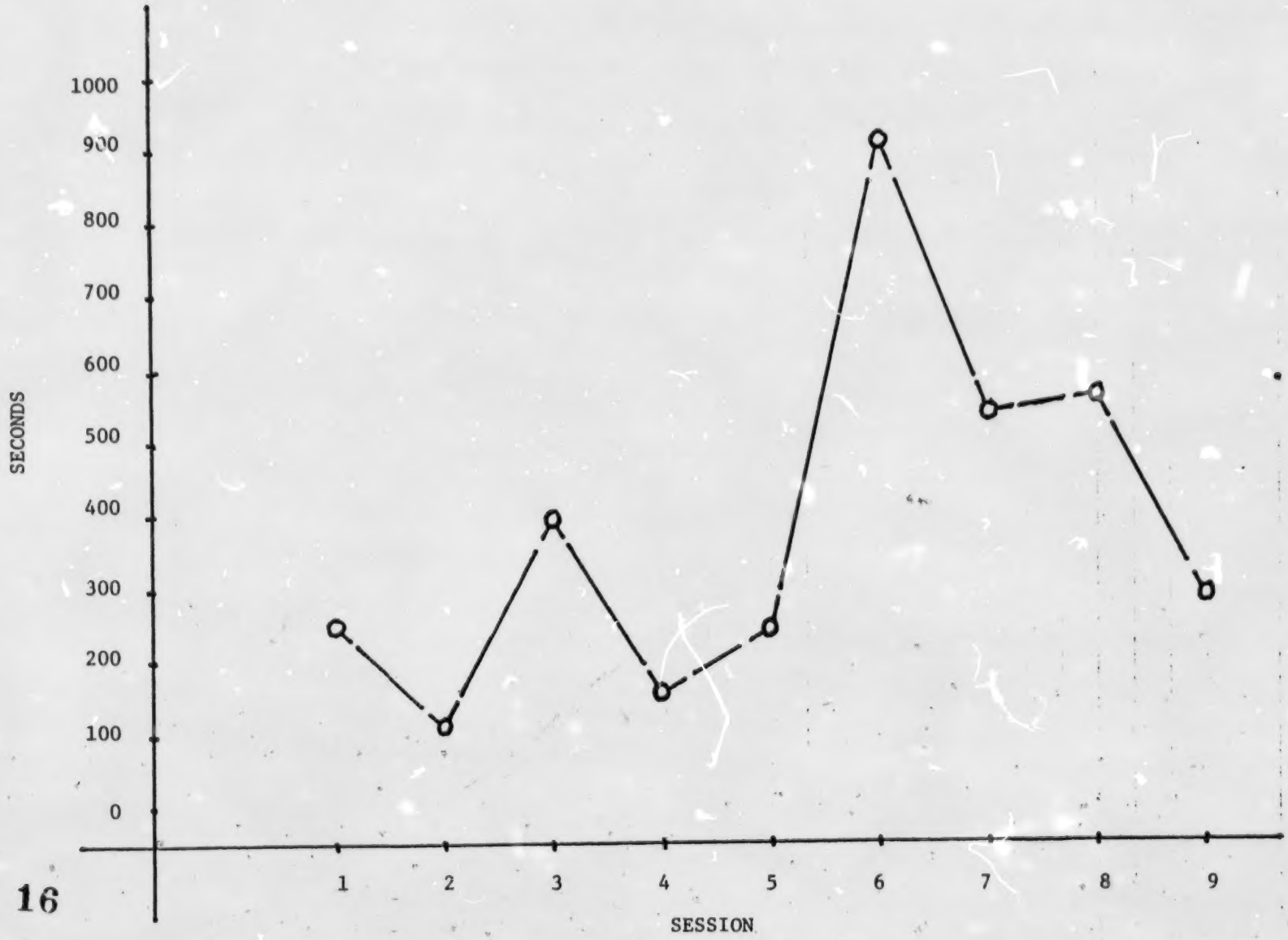

FIGURE III

Appropriate Verbal Statements